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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,758	12/27/2001	Gregg A. McClelland	8350.1647-00	9791

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Washington, DC 20005-3315

EXAMINER
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CASCHERA, ANTONIO A

ART UNIT	PAPER NUMBER
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2628

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/026,758

Applicant(s)

MCCLELLAND ET AL.

Examiner

Antonio A. Caschera

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12-20, 22, 23 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 4, 11, 21 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 5-7 and 25-28 rejected under 35 U.S.C. 102(b) as being anticipated by AutoCAD 2000 (“Inside AutoCAD ® 2000 Limited Edition,” by Burchard et al.).

In reference to claim 1, AutoCAD 2000 discloses a method of coloring an electronic schematic including at least one feature (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4) comprising the steps of:

- obtaining a schematic generated from a feature-based parametric modeling tool (Chapter 2 – “Starting New Projects with AutoCAD 2000” – discloses opening an existing AutoCAD drawing (Figure 2.1). Note, the Office interprets the AutoCAD drawing file functionally equivalent to a “feature-based” drawing file and the AutoCAD software a “feature-based parametric modeling tool” since AutoCAD drawing files, made up of lines and points, are created to represent objects (i.e. wiring or building schematics, machined parts etc), such objects comprising specific features such as line width, line color etc (see Chapter 4 - “Controlling Object Properties”);

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- identifying a set of features associated with the schematic to be colorized (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4);
- establishing a color scheme, wherein the color scheme includes a color, representing a visible wavelength in the electromagnetic spectrum, associated with at least one of the features in the set (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4); and
- automatically colorizing the at least one feature based on the color scheme to generate a colorized schematic (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4. Note, the Office interprets that since items or layers (and therefore objects of the layers) can be color customized, a change in color of a layer property changes all objects of that layer, automatically (further see Figure 4.4)) (further see *Response to Arguments* below).

In reference to claim 2, AutoCAD 2000 discloses all of the claim limitations as applied to claim 1 above in addition, AutoCAD 2000 discloses wherein each feature includes one or more elements (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4), and wherein the step of automatically colorizing the feature includes:

- associating an element with one of the features (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4);

- and automatically colorizing the element based on the color scheme (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4) (further see *Response to Arguments* below).

In reference to claim 3, AutoCAD 2000 discloses all of the claim limitations as applied to claim 1 above in addition, AutoCAD 2000 discloses storing the colorized schematic in an electronic format (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4 also see Chapter 2 – “Starting New Projects with AutoCAD 2000” wherein AutoCAD 2000 discloses opening from previously saved CAD files).

In reference to claim 5, AutoCAD 2000 discloses all of the claim limitations as applied to claim 2 above in addition, AutoCAD 2000 discloses:

- selecting a feature (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4); and
- selecting at least one element on the schematic to be associated with the selected feature (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4).

In reference to claim 6, AutoCAD 2000 discloses all of the claim limitations as applied to claim 5 above in addition, AutoCAD 2000 discloses selecting at least one element in a visual representation of the schematic (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4).

In reference to claim 7, AutoCAD 2000 discloses all of the claim limitations as applied to claim 5 above in addition, AutoCAD 2000 discloses entering one or more labels associated with

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the elements in step of selecting at least one element on the schematic (Chapter 15 – “Text Annotation”).

In reference to claim 25, AutoCAD 2000 discloses all of the claim limitations as applied to claim 1 above in addition, AutoCAD 2000 discloses wherein colors are associated with features and they are first, second and third colors (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4 includes by item or by layer; and wherein there are 256 different colors available for selection by the user).

In reference to claim 26, AutoCAD 2000 discloses all of the claim limitations as applied to claim 1 above in addition, AutoCAD 2000 discloses wherein establishing a color scheme includes receiving information from a user for establishing the color scheme (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4 includes by item or by layer; and wherein there are 256 different colors available for selection by the user).

In reference to claim 27, AutoCAD 2000 discloses all of the claim limitations as applied to claim 1 above in addition, AutoCAD 2000 discloses wherein establishing a color scheme includes receiving information from a user for associating the color with at least one of the features in the set (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4 includes by item or by layer; and wherein there are 256 different colors available for selection by the user).

In reference to claim 28, AutoCAD 2000 discloses all of the claim limitations as applied to claim 1 above in addition, AutoCAD 2000 discloses wherein automatically colorizing the at least one feature based on the color scheme to generate a colorized schematic includes

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automatically colorizing the at least one feature based on the color scheme and based on a user input (Chapter 4 - "Controlling Object Properties" – discloses object properties including color; Figures 4.3 and 4.4 includes by item or by layer; and wherein there are 256 different colors available for selection by the user).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over AutoCAD 2000 ("Inside AutoCAD ® 2000 Limited Edition," by Burchard et al.).

In reference to claim 8, AutoCAD 2000 discloses a method of colorizing an electronic schematic including at least one feature (Chapter 4 - "Controlling Object Properties" – discloses object properties including color; Figures 4.3 and 4.4) comprising the steps of:

- obtaining a schematic generated from a feature-based parametric modeling tool (Chapter 2 – "Starting New Projects with AutoCAD 2000" – discloses opening an existing AutoCAD drawing (Figure 2.1). Note, the Office interprets the AutoCAD drawing file functionally equivalent to a "feature-based" drawing file and the AutoCAD software a "feature-based parametric modeling tool" since AutoCAD drawing files, made up of lines and points, are created to represent objects (i.e. wiring or building schematics, machined parts etc), such objects

comprising specific features such as line width, line color etc (see Chapter 4 - “Controlling Object Properties”);

- identifying a set of features associated with the schematic to be colorized (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4);
- establishing a color scheme, wherein the color scheme includes a color, representing a visible wavelength in the electromagnetic spectrum, associated with at least one of the features in the set (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4); and
- automatically colorizing the at least one feature based on the color scheme to generate a colorized schematic (Chapter 4 - “Controlling Object Properties” – discloses object properties including color; Figures 4.3 and 4.4. Note, the Office interprets that since items or layers (and therefore objects of the layers) can be color customized, a change in color of a layer property changes all objects of that layer, automatically (further see Figure 4.4)). (further see *Response to Arguments* below)

AutoCAD 2000 does not explicitly disclose a computer-readable medium including instructions for performing a method of colorizing a schematic. It is well known in the art of computer graphics processing to store software, such as the software disclosed by AutoCAD 2000, on some type of computer-readable medium (i.e. RAM, ROM, hard drive, floppy disk, cd-rom etc) (Official Notice). It is would have been obvious to one of ordinary skill in the art for AutoCAD 2000 who teaches the methods of a software CAD program, to store the program on some type of



computer-readable medium, because it is well known in the art that programs are stored on computer-readable medium in order for computer processors to execute these programs.

In reference to claim 9, AutoCAD 2000 discloses all of the claim limitations as applied to claim 8 above. Claim 9 is similar in scope to claim 2 and is therefore rejected under equivalent rationale.

In reference to claim 10, AutoCAD 2000 discloses all of the claim limitations as applied to claim 9 above. Claim 10 is similar in scope to claim 3 and is therefore rejected under equivalent rationale.

In reference to claim 12, AutoCAD 2000 discloses all of the claim limitations as applied to claim 8 above. Claim 12 is similar in scope to claim 5 and is therefore rejected under equivalent rationale.

In reference to claim 13, AutoCAD 2000 discloses all of the claim limitations as applied to claim 12 above. Claim 13 is similar in scope to claim 6 and is therefore rejected under equivalent rationale.

In reference to claim 14, AutoCAD 2000 discloses all of the claim limitations as applied to claim 12 above. Claim 14 is similar in scope to claim 7 and is therefore rejected under equivalent rationale.

3. Claims 15-20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over AutoCAD 2000 ("Inside AutoCAD ® 2000 Limited Edition," by Burchard et al.) in view of Maeda et al. (U.S. Patent 5,966,310).

In reference to claims 15 and 22, AutoCAD 2000 discloses a method configured to colorize an electronic schematic including all of the steps disclosed above including obtaining a

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schematic generated from a feature-based parametric modeling tool (Chapter 2 – “Starting New Projects with AutoCAD 2000” – discloses opening an existing AutoCAD drawing (Figure 2.1) (see claim 1). AutoCAD 2000 does not explicitly disclose the system components however Maeda does. Maeda discloses a personal design CAD system (see column 1, lines 10-15 and column 2, lines 34-47) comprising:

- a processor (see column 13, lines 29-30, Maeda discloses the invention embodied on a personal computer which inherently comprises a processor; and
- a memory (column 2, lines 63-65 and #26 and 131 of Figure 3)), wherein the memory includes
- a colorization module configured to colorize the schematic to generate a colorized schematic (column 14, lines 14-35 and #122 of Figure 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the system of Maeda et al. with the CAD methods of AutoCAD 2000 in order to create a system, conforming to a user, for performing a series of processing including the design of the appearance and production of mechanical/electrical equipment (see column 2, lines 3-12 of Maeda et al.). Further, in reference to claim 22, claim 22 comprises the “identifying”, “establishing” and “colorizing” elements as seen in claim 8 above and therefore these elements are rejected under equivalent rationale as seen above.

In reference to claim 16, AutoCAD 2000 and Maeda et al. disclose all of the claim limitations as applied to claim 15 above. Although both AutoCAD 2000 and Maeda et al. disclose utilizing a CAD tool/software, neither AutoCAD 2000 nor Maeda et al. explicitly disclose the module including a Pro-Engineer software application in memory. It is well known

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in the art of computer graphics processing to store software, such as the software disclosed by AutoCAD 2000, on some type of memory (i.e. RAM, ROM, hard drive, floppy disk, cd-rom etc) (Official Notice). It is would have been obvious to one of ordinary skill in the art for AutoCAD 2000 who teaches the methods of a software CAD program, to store the program on some type of computer memory, because it is well known in the art that programs are stored on computer-readable mediums in order for computer processors to execute these programs.

In reference to claim 17, AutoCAD 2000 and Maeda et al. disclose all of the claim limitations as applied to claim 15 above. Maeda et al. also discloses wherein the colorization module is software configured to work with the modeling module during colorization of the schematic (see column 9, lines 34-38, the CAD module is configured to work with graphics module).

In reference to claim 18, AutoCAD 2000 and Maeda et al. disclose all of the claim limitations as applied to claim 15 above. Maeda et al. discloses the CAD invention embodied on a personal computer (see column 13, lines 29-30) which the Office interprets as inherently comprising an "output module" since Maeda et al. also discloses providing the output to a display (see column 9, lines 39-40 and #145 of Figure 4).

In reference to claim 19, AutoCAD 2000 and Maeda et al. disclose all of the claim limitations as applied to claim 15 above. Maeda et al. also discloses including an input module for accepting inputs from one or more of a keyboard, point-and-click device or an storage medium reader (see column 8, lines 58-62 and #11 of Figure 3).

In reference to claim 20, AutoCAD 2000 and Maeda et al. disclose all of the claim limitations as applied to claim 15 above. Claim 20 is similar in scope to 8 above and is therefore rejected under equivalent rationale.

In reference to claim 23, AutoCAD 2000 and Maeda et al. disclose all of the claim limitations as applied to claim 22 above. Claim 23 is similar in scope to claim 2 and is therefore rejected under equivalent rationale.

#### ***Allowable Subject Matter***

4. Claims 4, 11, 21 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In reference to claims 4, 11, 21 and 24, the prior art of record does not explicitly disclose determining revised portions and the unchanged portions of the revised schematic based on the application of the stored association to the revised schematic, in combination with the further limitations of claims 4, 11, 21 and 24 respectively above.

#### ***Response to Arguments***

5. Applicant's arguments filed 04/24/06 have been fully considered but they are not persuasive.

In reference to claims 1-14 and 25-28, Applicant argues that AutoCAD 2000 does not teach, "obtaining a schematic generated from a feature-based parametric modeling tool," (see page 12 of Applicant's Remarks). The Office disagrees and provides the following interpretation

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of the prior art. The Office interprets an AutoCAD 2000 drawing file functionally equivalent to a “feature-based” drawing file and the AutoCAD 2000 software a “feature-based parametric modeling tool” since AutoCAD drawing files, made up of lines and points (as indicated by Applicant see page 13, 1<sup>st</sup> paragraph of Applicant’s Remarks), are created to represent objects (i.e. wiring or building schematics, machined parts etc), such objects comprising specific features such as line width, line color etc (see Chapter 4 - “Controlling Object Properties”). Therefore, although AutoCAD 2000 may generate lines, points and surfaces these elements further merge to create objects which are seen as functionally equivalent to Applicant’s “features.” Even further, the breakdown of elements in CAD drawings stems from primitive lines and points therefore, the Office interprets AutoCAD 2000 to disclose the “obtaining....from a feature-based” element of Applicant’s claims.

Further, Applicant argues that AutoCAD 2000 does not explicitly disclose “automatically colorizing the at least one feature based on the color scheme to generate a colorized schematic,” (see page 13 of Applicant’s Remarks). The Office disagrees and interprets that since items or layers (and therefore objects of the layers) can be color customized, a change in color of a layer property changes all objects of that layer, automatically (further see Figure 4.4 of AutoCAD 2000)). In other words, the layers properties manager (of Figure 4.4) can be used to “automatically” change object’s, within certain layers, color properties using the color property characteristic for the layer.

Further in reference to claims 15-24, Applicant argues that there is no motivation to combine AutoCAD 2000 with the teachings of Maeda et al. (see pages 16-19 of Applicant’s Remarks). In response to applicant's argument that there is no suggestion to combine the

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references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, AutoCAD 2000 discloses a method of colorizing a CAD drawing and Maeda et al. discloses a personal design CAD system (see column 1, lines 10-15 and column 2, lines 34-47). Both references are directly related to CAD design and software implementations. Note, the Office has changed the motivation in the above rejection of claim 15 (for example). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the system of Maeda et al. with the CAD methods of AutoCAD 2000 in order to create a system, conforming to a user, for performing a series of processing including the design of the appearance and production of mechanical/electrical equipment (see column 2, lines 3-12 of Maeda et al.). Therefore, since both references are directly applicable to one another, the Office believes the combination of references to be just and maintains the current rejection based upon AutoCAD 2000 and Maeda et al.

6. Applicant's arguments with respect to claims 15-24 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781.

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The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung, can be reached at (571) 272-7794.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**571-273-8300 (Central Fax)**

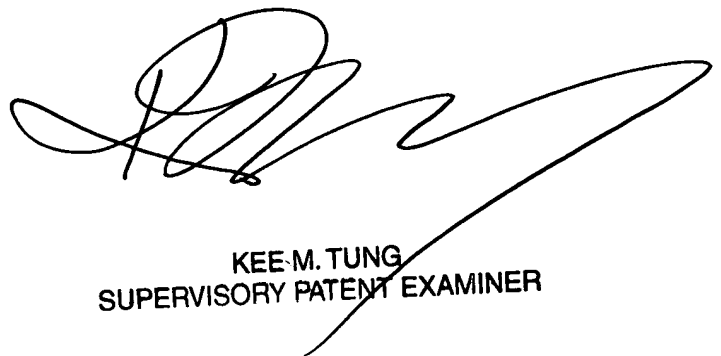
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (571) 272-2600.

aac



**PATENT EXAMINER**

7/6/06



**KEE M. TUNG**  
**SUPERVISORY PATENT EXAMINER**